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## (54) Floor surface for fencing competitions

(57) A piste for fencing competitions is made up of a number of rectangular parts arranged side-by-side in alignment, and interconnected by snap-interengagement of latch (27) and socket (29) components formed on two profile sections (11, 12) extending along the contact sides of adjacent aligned parts, these sections being also provided with components (19, 21) forming an articulated joint (17) between the two parts.

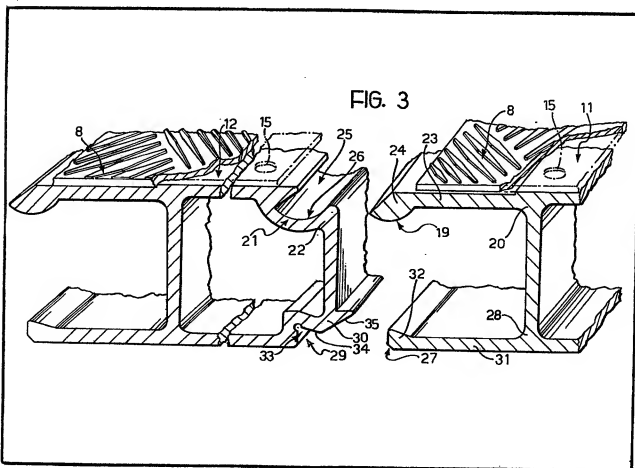


FIG. 1

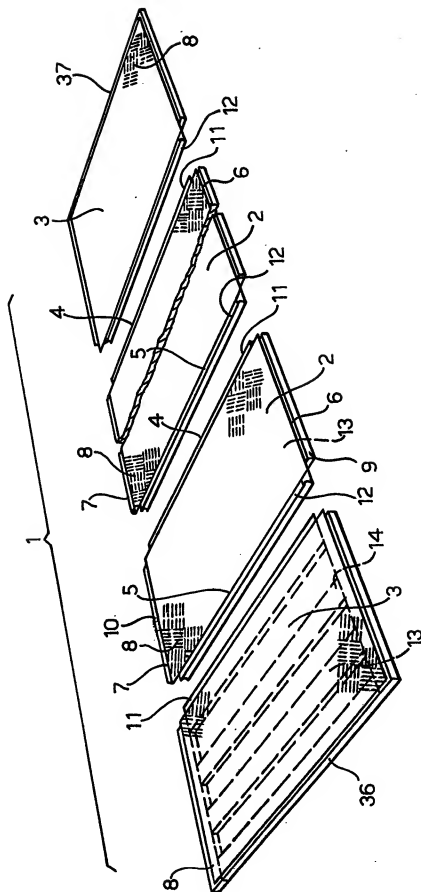


FIG. 2

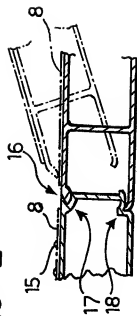
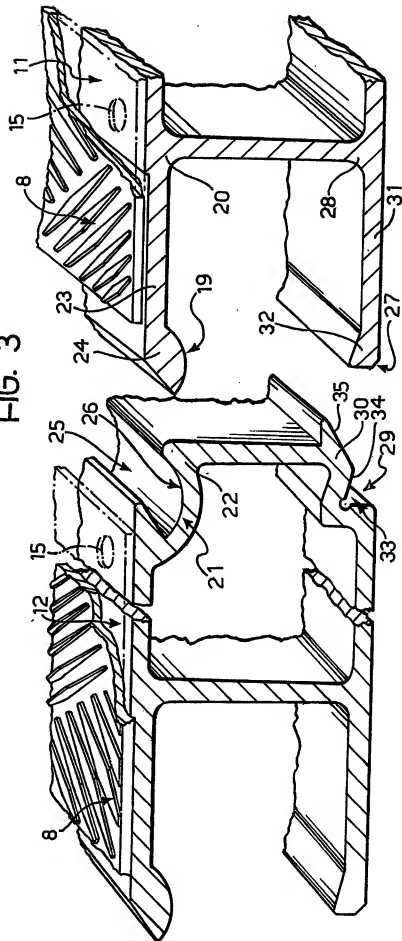


FIG. 3



## SPECIFICATION

**Piste for the sport of fencing and the like**

The present invention relates to a piste for the sport of fencing and the like, of the type

- 5 comprising a plurality of rectangular plate-like parts arranged side-by-side in alignment and connected by joining means along their contacting sides.

- Known pistes used for fencing competitions  
10 generally extend for a length of about 13 m to about 18 m, with a width of about 1.80 m, and are often installed in gymnasia with two or three side by side. Such pistes must be removable both to allow the gymnasium to be used for a different  
15 purpose as required and to allow competitions be held in other places which are not equipped.

The removal and assembly of pistes at present in use is a long and laborious operation due to the various connecting bolts which must be

- 20 manipulated. Moreover, care must be taken to disconnect and connect electrically the respective metallic coatings with which the parts are equipped to give the piste the desired electrical conductivity required for the hit-monitoring  
25 apparatus.

In the long run, the repeated dismantling and assembly of pistes of the known type causes damage to the parts and consequently  
30 necessitates periodic maintenance thereof and possibly repair.

The object of the present invention is to provide a piste of the type specified which has structural and functional characteristics such as to overcome the aforesaid disadvantages.

- 35 This object is achieved by a piste of the type specified which is characterised in that the joining means include snap-interengageable coupling means formed by two profile sections extending along the contact sides of adjacent aligned parts.

- 40 To advantage the joining means also include an articulation formed between the profile sections.

Further characteristics and advantages of the invention will emerge from the following  
45 description of a preferred embodiment, given by way of non-limiting example, with reference to the appended drawings, in which:

Figure 1 is a partially interrupted perspective view of a piste according to the invention with the parts detached from each other;

- 50 Figure 2 is a sectional view of a detail of the piste of Figure 1 on an enlarged scale, and

Figure 3 is a cut-away perspective view, on a further enlarged scale, of a detail of the piste of

- 55 Figure 1.  
With reference to the appended drawings, a piste for use in a fencing competition is generally indicated 1.

- The piste 1 includes a plurality of substantially  
60 plate-like parts arranged side-by-side in alignment, and each indicated 2, with the exception of the two end parts, which are indicated 3.

Each plate-like part has a rectangular plan

- 65 with long sides 4 and 5 of a length equal to the width of the piste, for example 1.80 m, and short sides 6 and 7 with a length equal to a sub-multiple of the total length of the piste, for example 1 m.

- 70 Each part 2 comprises a plate 8 of sheet aluminium or aluminium alloy with a friction-grip upper surface and a smooth lower surface.

- The friction-grip surface has a conventional design formed by elongate projections or  
75 "almonds" arranged in clusters of five disposed at 90° to the almonds of neighboring clusters to form a diagonal checker-board pattern and constitutes the tread surface of the piste.

- Each part 2 also includes aluminium box  
80 sections fixed to the lower surface of the plate 8 to stiffen the latter.

- More particularly the plate 8 is reinforced by two rectangular box sections 9 and 10 extending along the shorter sides 6 and 7, two substantially  
85 rectangular box sections 11 and 12 extending along the longer sides 4 and 5, which will be described in detail below, and two rectangular box sections 13 and 14, extending parallel to the longer sides 4 and 5 and located at equal intervals  
90 between the box sections 11 and 12.

The various box sections are fixed to the plate 8 by rivets 15 of conventional type.

The box sections 9, 10, 11, 12, 13 and 14 are fixed so as to be flat against the plate 8;

- 95 furthermore they have equal height, for example 25 mm, so that together they define a plane on which the part 2 rests on the floor.

The parts 2 and 3 are located side-by-side in alignment with longer sides in contact and are inter-connected by connecting means generally indicated 16 located along the longer sides.

- More particularly, the connecting means 16 comprise an articulated joint 17 formed on the box section 11 and the box section 12 of the two  
100 adjacent parts 2, 3, as well as snap-interengageable coupling means 18, also formed on the box sections 11 and 12.

The articulated joint 17 comprises a male joint component 19 extending along one edge 20 of the box section 12 adjacent the respective plate 8, and a female joint component 21 formed along an edge 22 of the box section 11 adjacent the respective plate 8.

- More particularly, the male joint component 19  
115 comprises a fillet 23 extending along the edge 20 and having a free edge 24 rounded in a circular arc while the female joint component 21 is formed as a channel 25 extending along the edge 22 with a base 26 rounded in an arc of a circle mating with the rounded free edge 24.

- The snap-interengageable coupling means 18  
120 comprise a projecting latch 27 extending along the edge 28 of the box section 12 adjacent the edge 20 and a socket 29 formed along an edge 30 of the box section 11 adjacent the edge 22.

In particular, the latch 27 comprises a resiliently yieldable fillet 31 projecting from and along the edge 28 and having a free beak-shaped edge 32, while the socket 29 is formed by a

channel 33 having a bottom surface 34 mating with the free beak-shaped edge 32. A ramp surface for the free beak-shaped edge 32 extends adjacent the channel 33 and is indicated 35.

The end parts 3 are entirely similar to the intermediate parts 2 except in that their respective free long sides which also constitute the free ends of the piste 1 are rectangular box sections 36 and 37 exactly like the box sections 13 and 14.

Finally it is noted that the box sections 11 and 12 with which the piste is fitted are the same as each other for reasons of unification, each having a male joint component and a latch and a female joint component and a socket, only one of which is actually used.

To advantage, a filling of plastics material, for example expanded polystyrene, is provided in the space defined in each part between the plate 8 and the box sections 9, 10, 11 and 12, to deaden local vibrations eliminating noise.

Assembly of the piste according to the invention is effected by bringing one part into engagement at an angle with a part which is already resting on the floor, so that the male joint component 19 engages the female joint component 21, and then rotating the part about the articulated joint 17 so formed until it rests on the floor as an elongation of the first part.

In the final part of the rotation, the latch 27, passing over the ramp surface 35, snap-engages in the socket 29.

The two parts are thus firmly interconnected, resting on the floor, in an operation which is performed very easily and quickly.

The connection which is formed is unusually strong so as to render any further connection, such as a transverse connection between the adjacent parts, superfluous. Moreover, the assembly and the removal of the piste according to the invention totally eliminates the need to effect electrical connections and disconnections

between the various parts, since the interconnection of the parts as described above also ensures perfect electrical connection between the parts.

Clearly numerous modifications and variants may be made to the piste described above in order to satisfy incidental requirements by an expert in the art, all of which, however, fall within the scope of the invention as defined by the following claims.

# Claims

1. A piste for fencing competitions, comprising a plurality of rectangular parts arranged side-by-side in alignment and interconnected along their sides of contact by connecting means which include snap-interengageable coupling means formed by two profile sections extending along the contact sides of adjacent aligned parts.

2. A piste according to Claim 1, in which the connecting means include an articulated joint formed by the two profile sections.

3. A piste according to Claim 2, in which the articulated joint comprises a male joint component extending along and projecting from an edge of one of the profile sections and a female joint component formed along an edge of the adjoining profile section of the adjacent part.

4. A piste according to any one of Claims 1 to 3, in which the snap-interengageable coupling means comprise a latch extending along and projecting from one edge of one of the profile sections and a socket formed along an edge of the other of the profile sections.

5. A piste according to any one of the preceding claims, in which each part includes a sheet having an upper surface provided with almond-shaped friction-grip projections.

6. A piste for fencing competitions, substantially as herein described with reference to and as shown in the accompanying drawings.